# Work Order ID 89317

*August-24-12*1:02:58 PM

*89317*



**Item ID:** D3886-1 **Accept** *N900040100* **Setup Start** *NS1*

**Revision ID:** **Stop** *NS2*

**Item Name:** Lug

**Start Date:** 8/16/12 **Start Qty:** 4.00 *4*

**Required Date:** 9/07/12 **Req'd Qty:** 4.00 *4*

**Reference:**

**Cust Item ID:**

**Customer:**

**Run Start** *NR1*

**Stop** *NR2*

**Approvals:** **Process Plan:** MLJ **Date:** 12/08/12 **Tooling:** _____ **Date:** _____

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| **Draw Nbr** | **Revision Nbr** | | | | | | | | |
| D3886 | B | | | | | | | | |
| 100 | | 0.00 | | | | | | | |
| *100* | | | | | | | | | |
| Bandsaw | **Memo** | 0.00 | | | | | | | |
| Jeaspa Bandsaw | BAND SAW<br>Cut blanks: 2.50" x 0.500" x 2.250" long | | | | | | | | |
| 110 | | 0.00 | | | | | | | |
| *110* | | | | | | | | | |
| HAAS 1 | **Memo** | 0.00 PO 12/09/13 | | | | | | | |
| HAAS CNC vertical machine #1 | HAAS CNC VERTICAL MACHINING #1<br>Machine as per Folio FA812 and Dwg D3886<br>Identify as D3886-1<br>Dwg Rev B Folio Rev AA | | | | | | | | |
| 120 | QC2- Inspect parts off machine FAI/FAIB | 0.00 | | | | | | | |
| *120* | | | | | | | | | |
| QC | **Memo** | 0.00 PO 12/09/13. | | | | | | | |
| Quality Control | | | | | | | | | |

DAS 02 8-89 BT 12 09 11 x4

DAS 02 8-89 BT 12-09-12 x4

DAS 02 8-89 BT 12 09 12 x4

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

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**Work Order ID 89317**
*August-24-12' 1:02:58 PM*

*89317*

**Item ID:** D3886-1 **Accept** *N900040100* **Setup Start** *NS1*
**Revision ID:** **Stop** *NS2*
**Item Name:** Lug

**Start Date:** 8/16/12 **Start Qty:** 4.00 *4*
**Required Date:** 9/07/12 **Req'd Qty:** 4.00 *4*
**Reference:**

**Cust Item ID:**
**Customer:**

**Run Start** *NR1*
**Stop** *NR2*

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 130 | QC8- Inspect parts - second check | 0.00 | | | | 4 | 0 | | |
| *130* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |
| 140 | Identify as per dwg & Stock Location: WA | 0.00 | | | | | | | |
| *140* | | | | | | 4x | | | SP 12-9-14 |
| Packaging | Memo | 0.00 | | | | | | | |
| Packaging | | | | | | | | | |
| 150 | QC21- Final Inspection - Work Order Release | 0.00 | | | | | | | |
| *150* | | | | | | | 12/9/14 | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

MF 12-09-14

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

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- ☐ Turning Sequence
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**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
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- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

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# Picklist Print

*August-24-12 1:02:57 PM*



**Work Order ID:** 89317

**Parent Item:** D3886-1 **Start Date:** 8/16/12 **Required Date:** 9/07/12

**Parent Item Name:** Lug **Start Qty:** 4.00 **Required Qty:** 4.00

**Comments:** IPP RevA: New issue DD verified by:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **M304B0.500X2.500**<br>304 BAR .500 x 2.50 | | Purchased | No | | | 100 | f | 25.2000 | **1.87** | **7.8736842** | | | |

| Location | Loc Qty | Loc Code |
|---|---|---|
| MAT050 | 25.2 | |
| 112764 | 5.671 | |
| 116135 | 0.375 | |
| 117685 | 0.4 | |
| 119231 | 6.754 | |
| 121728 | 12 | |

.7709

DAS 02 9-89

BT 12-09-11

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

| | | | |
|---|---|---|---|
| Skid-tube ☐ | Crosstube ☐ | Water Jet ☐ | Engineering ☐ |
| Machining ☐ | Small Fab ☐ | Prod. Eng. Coor. ☐ | Quality ☐ |
| Thermoforming ☐ | Finishing ☐ | Rec/Store/Packaging ☐ | Other ☐ |
| Large Fab ☐ | Composite ☐ | Supplier ☐ | |

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

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- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

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| DART AEROSPACE LTD | Work Order: | 89317 |
|---|---|---|
| | | |
| Description: Lug | Part Number: | D3886-1 |
| | | |
| Inspection Dwg: D3886 Rev: B | | Page 1 of 1 |

## FIRST ARTICLE INSPECTION CHECKLIST

[X] First Article [ ] Prototype

| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|---|---|---|---|---|---|---|
| R0.65 | +/-0.030 | .649 | ✓ | | Vern | RT-4 |
| 1.11 | +/-0.030 | 1.105 | ✓ | | " | |
| 1.95 | +/-0.030 | 1.956 | ✓ | | " | |
| 0.060 | +/-0.010 | .064 | ✓ | | " | |
| Ø0.510 | +0.008/-0.001 | .511 | ✓ | | " | |
| 0.06 x 45° | +/-0.030 x +/-0.5° | .050 | ✓ | | " | |
| 0.375 | +/-0.010 | | | | | |
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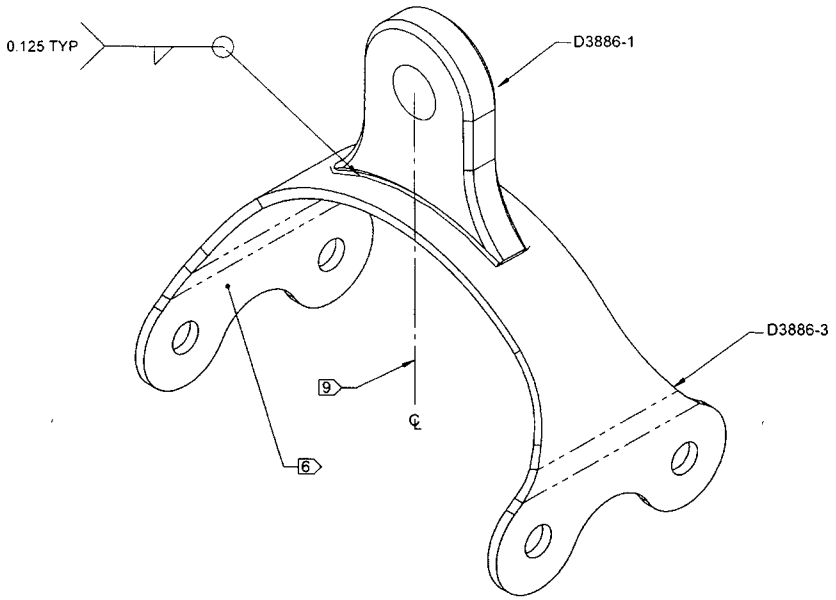
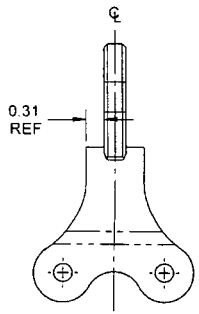
| Measured by: | DAS 02 RT | Audited by: | DAP | Prototype Approval: | N/A |
|---|---|---|---|---|---|
| Date: | 12-09-12 | Date: | 12.9.4 | Date: | N/A |

| Rev | Date | Change | Revised by | Approved |
|---|---|---|---|---|
| A | 09.09.15 | New Issue | KJ | |

| ITEM | QTY -041 | P/N | DESCRIPTION |
|---|---|---|---|
| 1 | X | D3886-041 | LUG ASSEMBLY |
| | | | |
| 2 | 1 | D3886-1 | LUG |
| 3 | 1 | D3886-3 | BRACKET |




SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 89317 MLJ
12/08/27

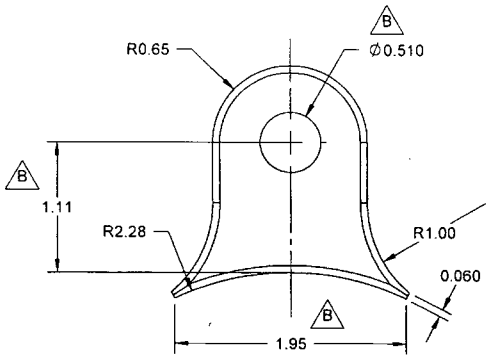
**D3886-041 LUG ASSEMBLY**

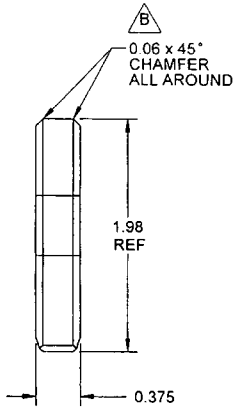
RELEASED
09/07/09 MF

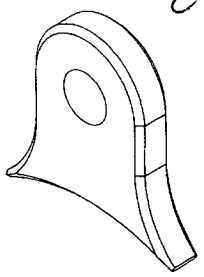
NOTES:
1) MATERIAL: N/A
2) FINISH: POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3886-041" AND BATCH NUMBER USING FINE POINT PERMANENT INK MARKER ON UNDERSIDE OF PART
7) WEIGHT: 0.53 lbs
8) WELD PER DART QSI 004
9) BOTH PARTS CENTER SHOULD BE IN LINE WITH THE ℄

| REV. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| B | RE-DESIGN D3886-1 (ZN B4-2); RE-DESIGN D3886-3 (ZN A4-3); REVISED D3886-3F (ZN B4-4) | RF | 09.06.30 |
| A | NEW ISSUE | RF | 09.03.30 |

| | | | |
|---|---|---|---|
| DESIGN | RF | DART AEROSPACE USA, INC. | |
| DRAWN | RF | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. D3886 | REV. B |
| MFG. APPR. | | | SHEET 1 OF 4 |
| APPROVED | | TITLE LUG ASSEMBLY | SCALE NTS |
| DE APPR. | | | |
| DATE | 09.06.30 | | |



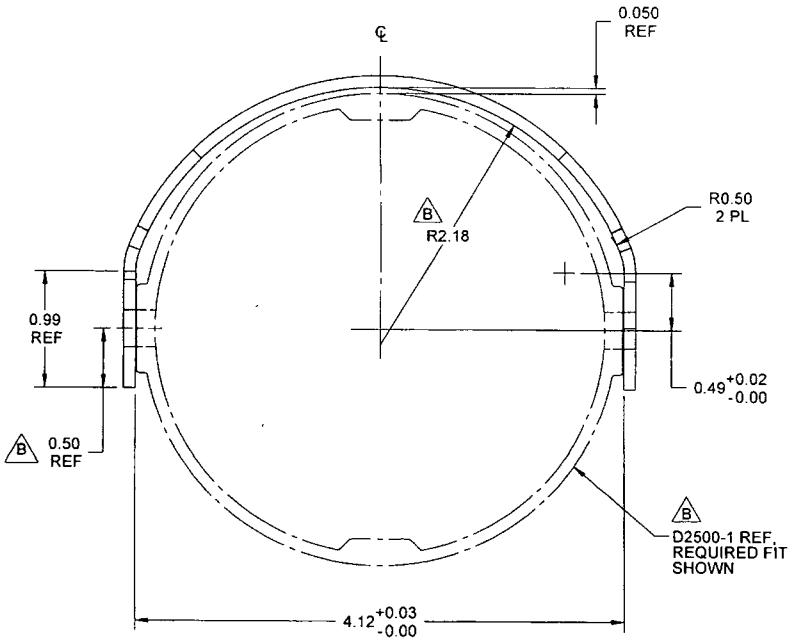
**D3886-1 LUG** B

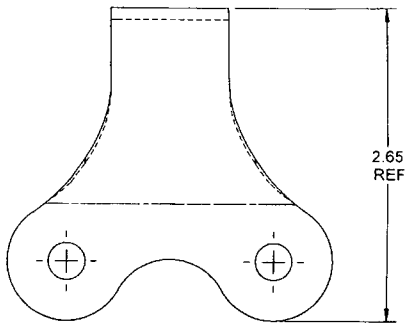
RELEASED
09/6/15 MW

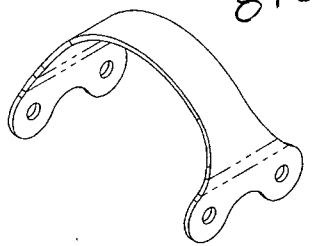
NOTES:
1) MATERIAL: AISI 304/316 STAINLESS STEEL BAR (REF. DART SPEC. M304B0.750X2.500)
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.23 lbs

| | | | |
|---|---|---|---|
| DESIGN | RF | DART AEROSPACE USA, INC. | |
| DRAWN | RF | PORT HADLOCK, WA | |
| CHECKED | RF | DRAWING NO. D3886 | REV. B |
| MFG. APPR. | | | SHEET 2 OF 4 |
| APPROVED | | TITLE LUG ASSEMBLY | SCALE NTS |
| DE APPR. | | | |
| DATE | 09.06.30 | | |

89317



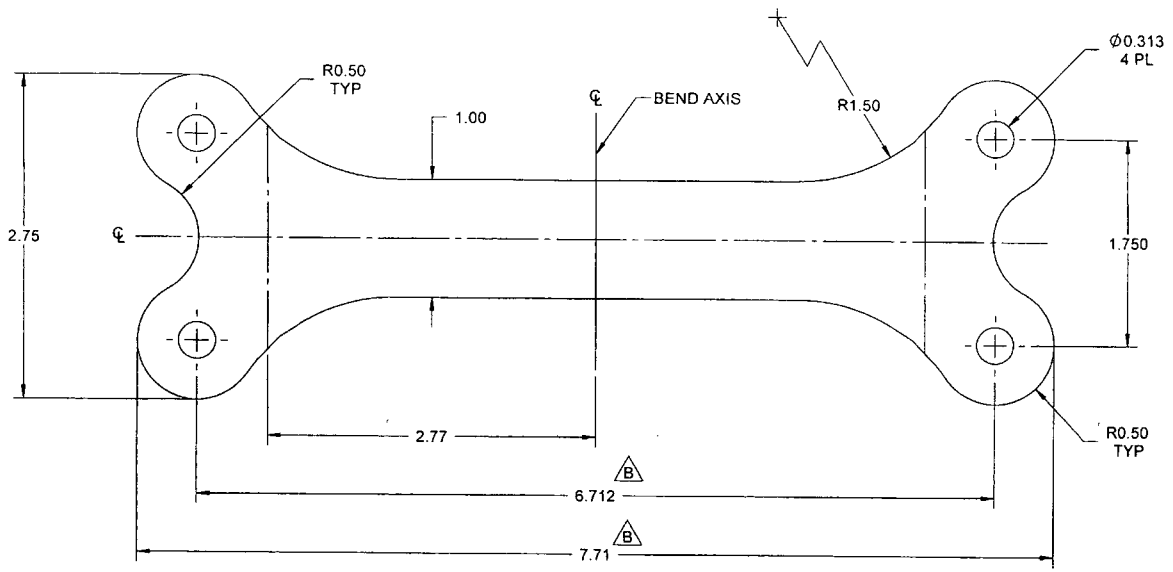



RELEASED
09/07/15

**D3886-3 BRACKET** (B)
(MAKE FROM D3886-3F)

| | | |
|---|---|---|
| DESIGN | RF | **DART AEROSPACE USA, INC.** PORT HADLOCK, WA |
| DRAWN | RF | |
| CHECKED | | DRAWING NO. D3886 REV. B |
| MFG. APPR. | | SHEET 3 OF 4 |
| APPROVED | | TITLE LUG ASSEMBLY SCALE NTS |
| DE APPR. | | |
| DATE | 09.06.30 | |

E9317




**D3886-3F FLAT PATTERN** (B)

RELEASED
9/07/15

NOTES:
1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET 12 GAUGE (0.100) THICK, (REF. DART SPEC. M304S12GA)
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.30 lbs

| | | | |
|---|---|---|---|
| DESIGN | RF | DART AEROSPACE USA, INC. | |
| DRAWN | RF | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. D3886 | REV. B |
| MFG. APPR. | | | SHEET 4 OF 4 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | LUG ASSEMBLY | NTS |
| DATE | 09.06.30 | | |